AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-28. (Canceled)

29. (Currently amended) An array of arrays comprising:

(a) a first substrate with a surface comprising a plurality of assay wells comprising samples; and

(b) a second substrate comprising a plurality of projections, each projection comprising an array location, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said first substrate and said second substrate are arranged such that projections of said second substrate are fitted into assay wells of the first substrate. ~~plurality of projections is configured to be dipped from above into said plurality of assay wells comprising samples.~~

30. (Previously presented) The array of arrays according to claim 29, further comprising a hybridization chamber configured so as to receive said second substrate.

31. (Previously presented) The array of arrays according to claim 29, wherein said assay wells comprise wells of a microtiter plate.

32. (Previously presented) The array of arrays according to claim 31, comprising 96 wells.

33. (Previously presented) The array of arrays according to claim 31, comprising 384 wells.

34. (Previously presented) The array of arrays according to claim 31, comprising 1536 wells.

35. (Previously presented) The array of arrays according to claim 29, wherein said bioactive agents are selected from the group consisting of nucleic acids, nucleic acid analogs, peptides, peptide structural analogs, saccharides, fatty acids, steroids, purines, and pyrimidines.

36. (Previously presented) The array of arrays according to claim 29, wherein said array location comprises from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

37. (Previously presented) The array of arrays according to claim 29, wherein said array location comprises from 100,000 to about 10,000,000 bioactive agents per square centimeter.

38. (Previously presented) The array of arrays according to claim 29, wherein said array location comprises from 10,000 to about 100,000 bioactive agents per square centimeter.

39. (Previously presented) The array of arrays according to claim 29, wherein said bioactive agents are directly coupled to said array location.

40. (Previously presented) The array of arrays according to claim 29, wherein said bioactive agents are attached to microspheres and wherein said microspheres are associated with said array location.

41. (Currently amended) An array of arrays comprising a plate having wells and a substrate comprising a plurality of projections, each projection comprising an array location, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein projections of said substrate are fitted into wells of said plate. ~~said plurality of projections is configured to be dipped from above into said plurality of wells of a microtiter plate.~~

42. (Previously presented) The array of arrays according to claim 41, comprising 96 wells.

43. (Previously presented) The array of arrays according to claim 41, comprising 384 wells.

44. (Previously presented) The array of arrays according to claim 41, comprising 1536 wells.

45. (Previously presented) The array of arrays according to claim 41, wherein said bioactive agents are selected from the group consisting of nucleic acids, nucleic acid analogs, peptides, peptide structural analogs, saccharides, fatty acids, steroids, purines, and pyrimidines.

46. (Previously presented) The array of arrays according to claim 41, wherein said array location comprises from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

47. (Previously presented) The array of arrays according to claim 41, wherein said array location comprises from 100,000 to about 10,000,000 bioactive agents per square centimeter.

48. (Previously presented) The array of arrays according to claim 41, wherein said array location comprises from 10,000 to about 100,000 bioactive agents per square centimeter.

49. (Previously presented) The array of arrays according to claim 41, wherein said bioactive agents are directly coupled to said array location.

50. (Previously presented) The array of arrays according to claim 41, wherein said bioactive agents are attached to microspheres and wherein said microspheres are associated with said array location.

51. (Currently amended) The array of arrays according to claim 29, wherein said plurality of projections is configured to be used as sticks that stir the sample in said assay wells[[,]].

52. (Previously presented) The array of arrays according to claim 29, wherein said second substrate comprises a molded substrate comprising said projections.

53. (Previously presented) The array of arrays according to claim 29, wherein said second substrate comprises fiber optic bundles.

54. (Previously presented) The array of arrays according to claim 29, wherein said second substrate comprises arrays made by photolithographic techniques.

55. (Previously presented) The array of arrays according to claim 41, wherein said plurality of projections is configured to be used as sticks that stir the sample in said assay wells.

56. (Previously presented) The array of arrays according to claim 41, wherein said second substrate comprises a molded substrate comprising said projections.

57. (Previously presented) The array of arrays according to claim 41, wherein said second substrate comprises fiber optic bundles.

58. (Previously presented) The array of arrays according to claim 41, wherein said second substrate comprises arrays made by photolithographic techniques.

59. (Previously presented) The array of arrays according to claim 29, wherein said first and second substrates are configured to be moved relative to one another in three dimensions when said sample is in said assay wells.

60-75. (Canceled)

76. (New) The array of arrays according to claim 29, wherein said bioactive agents comprise nucleic acids.

77. (New) The array of arrays according to claim 29, wherein said second substrate is not a fiber optic array.

78. (New) The array of arrays according to claim 41, wherein said bioactive agents comprise nucleic acids.

79. (New) The array of arrays according to claim 41, wherein said substrate is not a fiber optic array.

80. (New) An array of arrays comprising:

(a) a first substrate with a surface comprising a plurality of wells; and

(b) a second substrate comprising a plurality of projections, each projection comprising an array location, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein projections of said second substrate are fitted into wells of the first substrate.

81. (New) The array of arrays according to claim 80, wherein said first substrate comprises 96 wells.

82. (New) The array of arrays according to claim 80, wherein said first substrate comprises 384 wells.

83. (New) The array of arrays according to claim 80, wherein said first substrate comprises 1536 wells.

84. (New) The array of arrays according to claim 80, wherein said bioactive agents comprise nucleic acids.

85. (New) The array of arrays according to claim 80, wherein said array location comprises from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

86. (New) The array of arrays according to claim 80, wherein said array location comprises from 100,000 to about 10,000,000 bioactive agents per square centimeter.

87. (New) The array of arrays according to claim 80, wherein said array location comprises from 10,000 to about 100,000 bioactive agents per square centimeter.

88. (New) The array of arrays according to claim 80, wherein said bioactive agents are directly coupled to said array location.

89. (New) The array of arrays according to claim 80, wherein said bioactive agents are attached to microspheres and wherein said microspheres are associated with said array location.

90. (New) The array of arrays according to claim 80, wherein said plurality of projections is configured to be used as sticks that stir the sample in said assay wells.

91. (New) The array of arrays according to claim 80, wherein said second substrate comprises a molded substrate comprising said projections.

92. (New) The array of arrays according to claim 80, wherein said second substrate comprises fiber optic bundles.

93. (New) The array of arrays according to claim 80, wherein said second substrate comprises arrays made by photolithographic techniques.

94. (New) The array of arrays according to claim 80, wherein said second substrate is not a fiber optic array.

95. (New) An array of arrays comprising:

(a) a first substrate with a surface comprising a plurality of wells; and

(b) a second substrate comprising a plurality of projections, each projection comprising an array location, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, wherein said plurality of projections is configured to be dipped from above into said wells, and wherein said second substrate is not a fiber optic array.

96. (New) The array of arrays according to claim 95, wherein said first substrate comprises 96 wells.

97. (New) The array of arrays according to claim 95, wherein said first substrate comprises 384 wells.

98. (New) The array of arrays according to claim 95, wherein said first substrate comprises 1536 wells.

99. (New) The array of arrays according to claim 95, wherein said bioactive agents comprise nucleic acids.

100. (New) The array of arrays according to claim 95, wherein said array location comprises from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

101. (New) The array of arrays according to claim 95, wherein said array location comprises from 100,000 to about 10,000,000 bioactive agents per square centimeter.

102. (New) The array of arrays according to claim 95, wherein said array location comprises from 10,000 to about 100,000 bioactive agents per square centimeter.

103. (New) The array of arrays according to claim 95, wherein said bioactive agents are directly coupled to said array location.

104. (New) The array of arrays according to claim 95, wherein said bioactive agents are attached to microspheres and wherein said microspheres are associated with said array location.

105. (New) The array of arrays according to claim 95, wherein said plurality of projections is configured to be used as sticks that stir the sample in said assay wells.

106. (New) The array of arrays according to claim 95, wherein said second substrate comprises a molded substrate comprising said projections.

107. (New) The array of arrays according to claim 95, wherein said second substrate comprises arrays made by photolithographic techniques.

108. (New) An array of arrays comprising:

(a) a first substrate with a surface comprising a plurality of wells; and

(b) a second substrate comprising a plurality of projections, each projection comprising an array location, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents directly coupled thereto, and wherein said plurality of projections is configured to be dipped from above into said plurality of wells.

109. (New) The array of arrays according to claim 108, further comprising a hybridization chamber configured so as to receive said second substrate.

110. (New) The array of arrays according to claim 108, wherein said first substrate comprises 96 wells.

111. (New) The array of arrays according to claim 108, wherein said first substrate comprises 384 wells.

112. (New) The array of arrays according to claim 108, wherein said first substrate comprises 1536 wells.

113. (New) The array of arrays according to claim 108, wherein said bioactive agents comprise nucleic acids.

114. (New) The array of arrays according to claim 108, wherein said array location comprises from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

115. (New) The array of arrays according to claim 108, wherein said array location comprises from 100,000 to about 10,000,000 bioactive agents per square centimeter.

116. (New) The array of arrays according to claim 108, wherein said array location comprises from 10,000 to about 100,000 bioactive agents per square centimeter.

117. (New) The array of arrays according to claim 108, wherein said second substrate is not a fiber optic array.

118. (New) The array of arrays according to claim 108, wherein said plurality of projections is configured to be used as sticks that stir the sample in said assay wells.

119. (New) The array of arrays according to claim 108, wherein said second substrate comprises a molded substrate comprising said projections.

120. (New) The array of arrays according to claim 108, wherein said second substrate comprises arrays made by photolithographic techniques.